Printed Pages: 2

Roll No.										

Paper Code: RCA101

B. TECH.
FIRST SEMESTER EXAMINATION, 2016-2017
COMPUTER CONCEPTS & PRINCIPALS OF PROGRAMMING

[Time: 3 Hours] [Total Marks: 70]

Note: Attempt ***ALL*** questions. Assume suitable data, if required. Answers must be precise

Q.1. Attempt any five part of the following. **3x5=15**

a) Discuss the generation of computer on the basis of size, technology and performance.
b) What is Software? Differentiate b/w application and System Software.
c) Discuss Memory hierarchy on the basis of speed and cast per unit size.
d) Convert the following no.
   a) $(BAD)_{15}=(?)_{8}$ b) $(101.011)_{10}=(?)_{2}$ c) $(DABBA + BAD)_{16}=(?)_{10}$
e) Discuss block diagram of Digital Computer.
f) What is difference in Static RAM and dynamic RAM?
g) What is cache memory?

Q.2. Attempt any five part of the following. **3x5=15**

a) What is OS? Write different functions perform by OS.
b) Difference between Linux and Unix.
c) What is cloud computing? Discuss types of cloud computing.
d) Discuss advantage and disadvantage of SaaS.
e) Discuss the architectural model of Grid Computing.
f) What do you mean by Internet of Things? Write down the advantage of Internet of Things.
g) What do you understand by Big Data?

Q.3. Attempt any five part of the following. **3x5=15**

a) Name and discuss three attributes of a good language that you consider to be most important.
b) What is Flow chart? What are different symbols used to draw flow chart for a problem.
c) Write the algorithm to find prim no. from1 to 100.
d) Define Compiler, Interpreter and Assembler.
e) What is the role of Linker and Loader to compile and in execution of a program?

f) Discuss the translator and virtual architecture of a standard language.
g) Write a program to print digit from 1 to 100 in Python programming language.

Q.4. Attempt any five part of the following. **3x5=15**

a) What is Data type? Discuss primitive and non-primitive data type with example.
b) What is operator? Write the different logical operator available in C language.
c) What implementation problems exist with data objects referred to by pointers?
d) What is loop? Discuss the different types of loop with example.
e) Write a program to make an array to store odd no. at even index and even no at odd index and print it.
f) What is type checking? What are the advantages and disadvantage of dynamic type checking?
g) Give five attributes of data objects, describe them briefly.

Q.5. Write short notes on any two parts of the following **5x 2=10**

a) Dynamic scope rules in local referencing environments
b) Subprogram Sequence Control
c) Polymorphism